



US005339392A

United States Patent [19][11] **Patent Number:** **5,339,392****Risberg et al.**[45] **Date of Patent:** **Aug. 16, 1994**

[54] **APPARATUS AND METHOD FOR CREATION OF A USER DEFINABLE VIDEO DISPLAYED DOCUMENT SHOWING CHANGES IN REAL TIME DATA**

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[21] Appl. No.: **636,044**

[22] Filed: **Dec. 28, 1990**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 632,551, Dec. 21, 1990, which is a continuation-in-part of Ser. No. 601,117, Oct. 22, 1990, Pat. No. 5,257,369, which is a continuation-in-part of Ser. No. 386,584, Jul. 27, 1989, Pat. No. 5,187,787.

[51] Int. Cl.⁵ **G06F 15/62; G06F 15/16**

[52] U.S. Cl. **395/161; 395/155; 364/408**

[58] **Field of Search** **364/144-149, 364/155, 161, 408, 411, 412, 419; 358/84**

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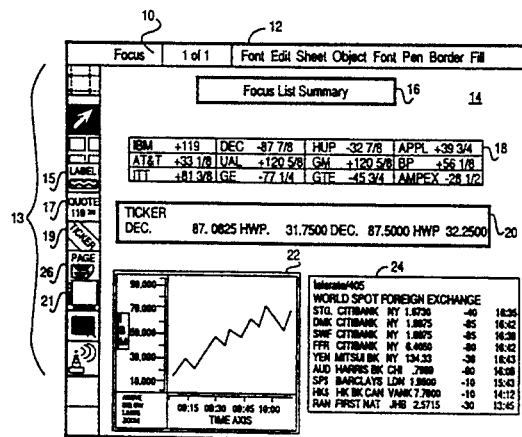
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[57] **ABSTRACT**

A software program providing a facility for a user to compose a custom active document using tools provided by the program. The active document can be comprised of one or more sheets each of which is composed in a custom manner by the user and each of which can show real time data and the changes therein generated by any complex system. The user can select which real time data is to be displayed, where it is to be displayed and in what format and style it is to be displayed. The user can control the "look" of the active document through full control of the fonts, colors, pen etc. The user may also define alarm limits against which real time data updates are compared as well as scripts of commands to be performed in case an alarm limit is exceeded. Scripts of commands to be performed written by the user may also be invoked from a menu option. The tools provided for a financial analysis embodiment of the invention allow the user to layout each sheet of the active document with: quotes of prices, volume etc. on various financial instruments such as stocks, bonds, etc., tickers showing trade data, graphs over time of various values or superimposed graphs of changes over time of several real time data values, bar graphs of some aspect of a set of financial instruments, segments defined by the user of pages selected by the user of page-based financial services like telerate, and groups of real time data. "Buttons" can be programmed to perform any user defined script of actions. Metadata and style maps are used to offload some of the work of specifying the format of the displayed objects from the user to the machine itself.



46 Claims, 35 Drawing Sheets